**FIRST RECORD OF *DIDOGOBIUS SCHLIEWENI* MILLER, 1992 (GOBIIDAE) IN THE WESTERN MEDITERRANEAN SEA.** **L. BALLESTA**, Université Montpellier II, Laboratoire Ichthyologie, 34095 Montpellier Cedex 05, FRANCE, **P.J. MILLER**, The University Bristol, School of Biological Sciences, BS8 1UG, UK & **J.-P. QUIGNARD** (1).

**ABSTRACT**. - *Didogobius schlieweni* Miller, 1992 was described from a single specimen collected in the northern Adriatic Sea. The present paper reports a new record of this distinctively patterned species. This cryptobenthic gobiid has been photographed in the Marine Reserve of Cerbère/Banyuls-sur-Mer (north-western Mediterranean, France).

Key-words. - Gobiidae, *Didogobius schlieweni*, MED, Banyuls-sur-Mer, First record.

Even if the Mediterranean is an ichthyologically well-investigated sea, close attention to small fishes during the last decades has revealed an important number of goby species new to science. From 1966 to 1995, seven new gobiid species were described (Miller, 1966, 1968, 1982, 1992; Bath, 1971; Zander and Jelinek, 1976; Ahnelt and Patzner, 1995). Among these seven gobiids, three were attributed to the new genus *Didogobius* (*D. bentuvii* Miller, 1966; *D. schlieweni* Miller, 1992; *D. splechtnai* Ahnelt & Patzner, 1995) otherwise represented by *D. kochi* Van Tassell from the Canaries Islands (Van Tassell, 1988). Recent investigations in shallow waters of the Mediterranean have also extended the known geographical range of rarely found cryptobenthic gobiid species. For example, *Corcyrogobius liechtensteini* Kolombatovic was recorded for the first time in 1891 in the Adriatic Sea and the second capture made a century latter (Ahnelt *et al.*, 1994), in the western Mediterranean at the Balearic island of Ibiza. The present paper reports a similar observation even if the time scale is not the same.

*Didogobius schlieweni* was described and named by Miller in 1992 for a single specimen collected in shallow water at Unije island, near Cres, in the northern Adriatic Sea. Until now, the holotype was the only known specimen. The present paper concerns the second record of this species, made in June 1997 in the Cerbère / Banyuls-sur-Mer Marine Reserve, and therefore, for the first time in the western Mediterranean (French coast).

## Material and Methods

The observed *Didogobius schlieweni* was not caught but photographed with the underwater camera Nikon RS + 50 mm macro lens during a nocturnal scuba-diving investigation at "Cape du Troc", Cerbère / Banyuls-sur-Mer Marine Reserve, France, north-western Mediterranean, 24 June 1997 (Fig. 1). This macro lens (50 mm AF Nikkor for Nikon RS) permits reading of the macro-photography scale used and so an estimate of the measurements of the fish with good approximation. Abbreviations for fins as used by Miller (1992).

## Results

### *Identification*

Knowledge of the ecology of small cryptobenthic gobiid species in the Mediterranean is somewhat incomplete (Miller 1986, 1992; Ahnelt *et al.*, 1994). Moreover, Ahnelt and Patzner (1995) specify that such gobiids are still often overlooked or incorrectly synonymized. However, Miller (1992) emphasized on the fact that *Didogobius schlieweni* is a distinctively patterned species. Also, on the basis of coloration, finnage and body proportions analysis, the photographed specimen (Fig. 2) can be identified as *Didogobius schlieweni* Miller, 1992.

### *Morphometric data*

Standard length: 35 mm; caudal fin length: 11 mm. This specimen is larger than the holotype (23 mm + 6 mm). Body proportions as percentage of standard length: head length, 28.6; snout to D1 origin, 37.1; snout to D2 origin, 58.6; caudal peduncle, 11.4; D1 base, 20; D2 base, 31.4. As percentage of head length: eye, 20. Except for D1 base and caudal peduncle, body proportions are well in agreement with the data given for the holotype (Miller, 1992).

### *Fin description*

D1 VI; D2 I/13. D1 rays not elongate; interdorsal space membranous; large P without free rays; large C edge rounded from upper to lower origin.

*Coloration*

Photography has permitted description of the live fish. Head and body very dark brown, composed of large melanophores and a paler matrix; conspicuous white markings: large ring on the nape, four large spots flanking just below the dorsal fins bases (opposite rear of D1, anterior half D2, middle D2, opposite rear of D2 respectively), and another spot overlapping D2 and body at end of D2 base. All fins are darker than body and head. P-base with at least three white spots. Large white band on distal part of D1, D2, and C but none of A and P. Two or three white dots are present along each fin ray of D1 and D2. Numerous

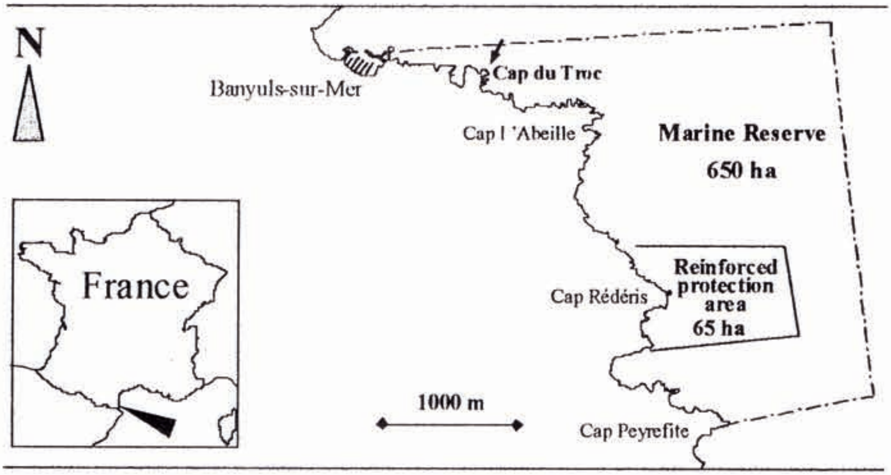

Fig. 1. - Location of the observed *Didogobius schlieweni* (arrow) in Cerbere/Banyuls-sur-Mer Reserve.

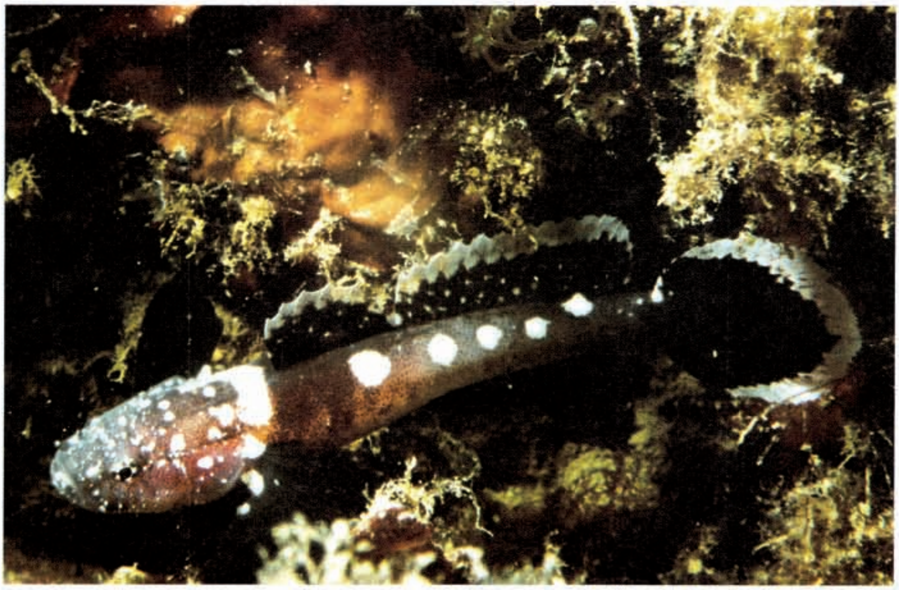

Fig. 2. - Photograph of *Didogobius schlieweni* Miller, 1992 alive in its habitat: pebbles in shallow water. Total length: 46 mm. (Photo: L. Ballesta).

white dots on the head. Five white stripes radiate on the iris eye.

*Ecology*

Both Adriatic and Banyuls specimens have been found at the end of June, among pebbles on a rocky bottom. The depth was about 10 m. The same behaviour has been observed: "the fish was swimming slowly, using mainly its large pectoral fins, without the rapid darting movements often made by other gobies". It has been found at night, in a very crowded diving place during the day, so that it may have essentially a nocturnal activity. Discovery of *Didogobius schlieweni* in the Banyuls region (north-western Mediterranean) extends its geographical range. This confirms the hypothesis of Miller (1992) about a larger distribution than the Adriatic area "an essentially post-glacial water body (Bianco and Miller, 1990) where such a distinct form is perhaps unlikely to have evolved".

## Conclusion

The new record of *Didogobius schlieweni*, like those for *Corcyrogobius liechtensteini* (Ahnelt *et al.*, 1994), shows that rocky bottoms down to 20 m depth have not been well investigated. It seems that all cryptobenthic species linked to these biotopes of microtidal seas are far from being inventoried.

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